

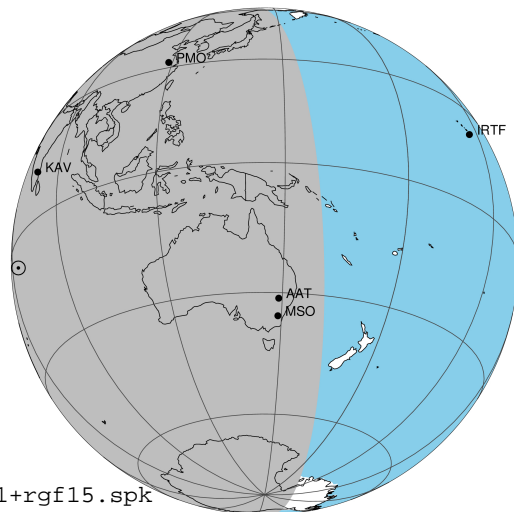
target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2043-04-06T19:33:01.480  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 4066623989679695488  
 2Mass ID (if available) : 18114562-2258009

Jupiter 2043-04-06T19:33:01 K9.22 G10.77 Pgt

ICRS Star Coord at Epoch: 18h 11m 45.62174s -22:58:01.46633s

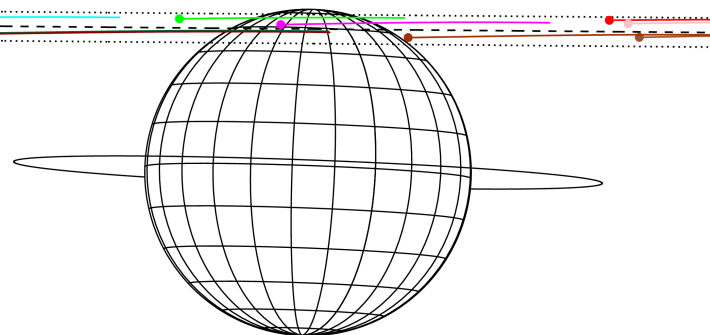
RUWE (>1.4 is poor) : 1.54  
 K magnitude : 9.217  
 G magnitude : 10.770  
 RP magnitude : 10.231  
 BP magnitude : 11.124  
 DUPflag : 0  
 Distance (au) : 4.966  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 6.21  
 Sun-Target sep (deg) : 103.59  
 Sun-Moon sep (deg) : 62.94  
 B (ring opening deg) : -2.45  
 PA of pole (deg) : -2.10  
 Pole direction: RA (deg): 268.05664  
 Dec (deg): 64.49732  
 C/A sky separation (") : 17.451  
 C/A sky separation (km) : 62859.2  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk

Jupiter 2043-04-06T19:33:01 K9.22 G10.77  
 Pgt



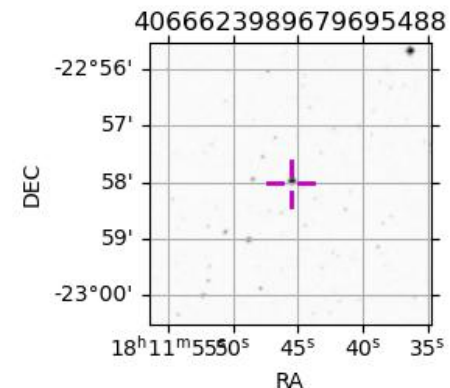
2043-04-06T19:33:01.4800 α: 18 11 45.6217 δ: -22 58 01.466 C/A \*\*\*\*\* PA 179.49 deg v\_sky + 6.21 km/s D 04.97 AU  
 Credit: Styled after SORA/Lucky Star

Earth  
 PIC  
 PAL  
 PMO  
 KPNO  
 MCD  
 TEN  
 IRTF  
 KAV  
 RIO  
 AAT  
 SAAO  
 MSO



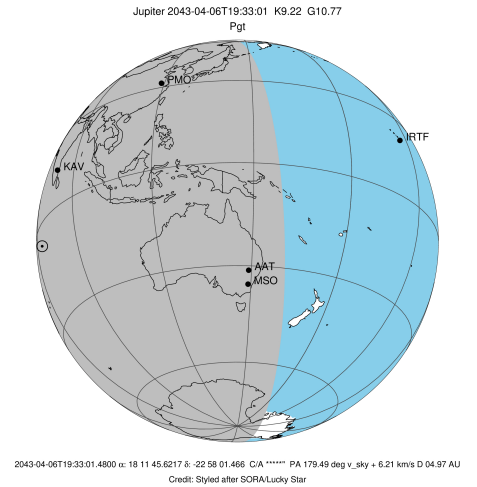
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1			Pnn
PAL	Palomar Mt (200")	33.4	243.1			Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8	+ +	APR 06 18:20 - APR 06 20:29	Pie
KPNO	Kitt Peak Natl Obs	32.0	248.4			Pnn
MCD	McDonald Obs. 2.7m	30.7	256.0			Pnn
TEN	Teide Obs./Tenerife	28.3	343.5			Pnn
IRTF	Mauna Kea/IRTF	19.8	204.5			Pnn
KAV	Kavalur Observatory	12.6	78.8	+	APR 06 20:35 - APR 06 20:35	Pne
RIO	Rio de Janeiro	-22.9	316.8			Pnn
ESO	European Southern Obs. (3.6m)	-29.3	289.3			Pnn
AAT	Siding Spring (AAT)	-31.3	149.1	+	APR 06 17:51 - APR 06 17:51	Pin
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+	APR 06 17:49 - APR 06 17:49	Pin

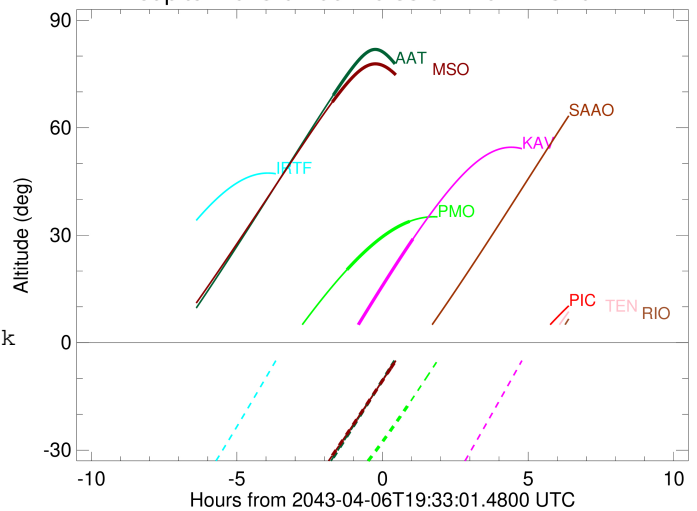


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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-04-06T19:24:04.140
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : PMO
Location              : Purple Mtn Obs. Nanking
Latitude (deg)        : 32.06667
E. Longitude (deg)    : 118.82089
Altitude (km)         : 0.364
Gaia source ID        : 4066623989679695488
2Mass ID (if available) : 18114562-2258009
ICRS Star Coord at Epoch: 18h 11m 45.62174s -22:58:01.46633s
RUWE (>1.4 is poor) : 1.54
K magnitude           : 9.217
G magnitude           : 10.770
RP magnitude          : 10.231
BP magnitude          : 11.124
DUPflag              : 0
Distance (au)         : 4.966
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 6.21
Sun-Target sep (deg) : 103.59
Sun-Moon sep (deg)   : 63.55
B (ring opening deg) : -2.45
PA of pole (deg)     : -2.10
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (") : 18.836
C/A sky separation (km) : 67848.9
NAIF SPICE kernels   : RAJobs_U111+rgf15.spk
URKALLv1.spk
naif0012.tls
nep097.bsp
nep101.bsp
sat4401.bsp
de440.bsp
earth_720101_070426.bpc
jup365.bsp
urall6.bsp
IAU_SATURN_for_RINGFIT.tpc
pck00010.tpc
earth_200101_990628_predict.bpc
uranus_ringframes_rfrench20220627_v1.tf
neptune_ringframes_rfrench20220702a_v1.tf
earth_flat_IAU.spk
    
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Jupiter 2043-04-06T19:33:01 K9.22 G10.77

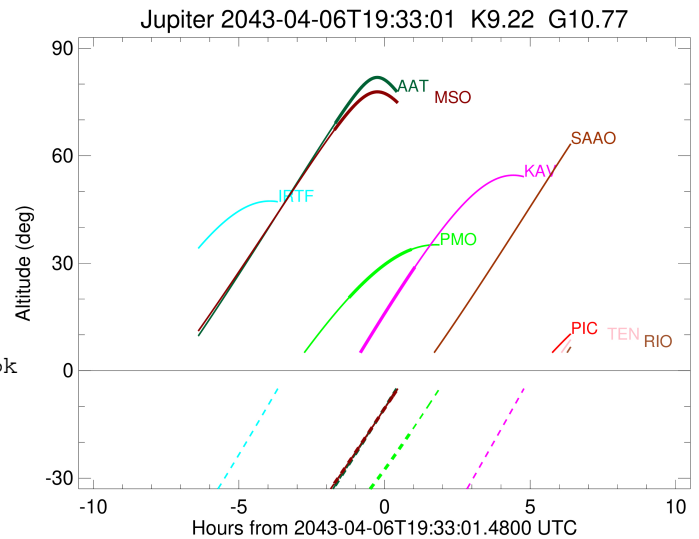
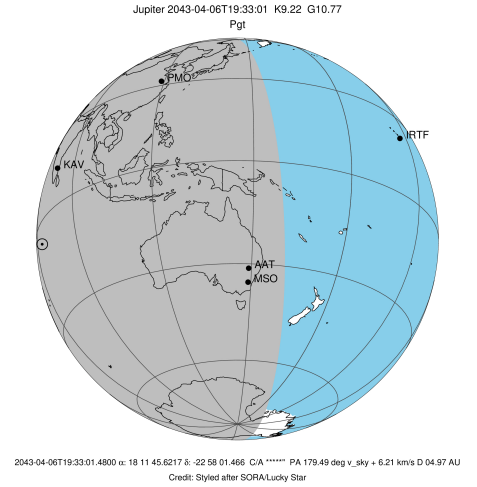


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-04-06T18:20:00.241	20.39	-40.12	71484.8	69.07	71.38
Jupiter	E	2043-04-06T20:29:02.320	33.86	-16.76	71484.5	73.54	75.41

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-04-06T19:12:28.760
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : KAV
Location             : Kavalur Observatory
Latitude (deg)       : 12.57556
E. Longitude (deg)  : 78.83167
Altitude (km)        : 0.722
Gaia source ID       : 4066623989679695488
2Mass ID (if available) : 18114562-2258009
ICRS Star Coord at Epoch: 18h 11m 45.62174s -22:58:01.46633s
RUWE (>1.4 is poor) : 1.54
K magnitude          : 9.217
G magnitude          : 10.770
RP magnitude         : 10.231
BP magnitude         : 11.124
DUPflag             : 0
Distance (au)        : 4.967
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 6.21
Sun-Target sep (deg) : 103.59
Sun-Moon sep (deg)  : 63.57
B (ring opening deg) : -2.45
PA of pole (deg)    : -2.10
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (") : 18.044
C/A sky separation (km) : 64998.2
NAIF SPICE kernels  : RAJobs_U111+rgf15.spk
URKALLv1.spk
naif0012.tls
nep097.bsp
nep101.bsp
sat4401.bsp
de440.bsp
earth_720101_070426.bpc
jup365.bsp
urall6.bsp
IAU_SATURN_for_RINGFIT.tpc
pck00010.tpc
earth_200101_990628_predict.bpc
uranus_ringframes_rfrench20220627_v1.tf
neptune_ringframes_rfrench20220702a_v1.tf
earth_flat_IAU.spk
    
```

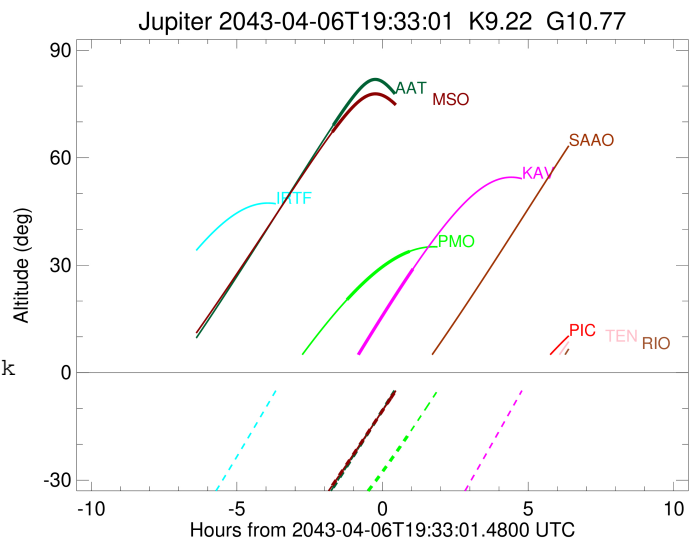
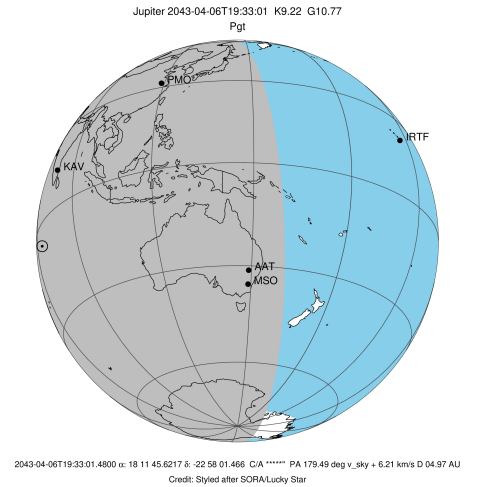


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-04-06T17:51:54.998	-6.51x	-66.50	71485.6	62.10	65.01
Jupiter	E	2043-04-06T20:35:42.417	28.94	-56.88	71484.9	68.31	70.69

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-04-06T19:34:30.640
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : AAT
Location              : Siding Spring (AAT)
Latitude (deg)       : -31.27703
E. Longitude (deg)   : 149.06608
Altitude (km)        : 1.164
Gaia source ID       : 4066623989679695488
2Mass ID (if available) : 18114562-2258009
ICRS Star Coord at Epoch: 18h 11m 45.62174s -22:58:01.46633s
RUWE (>1.4 is poor) : 1.54
K magnitude           : 9.217
G magnitude           : 10.770
RP magnitude          : 10.231
BP magnitude          : 11.124
DUPflag              : 0
Distance (au)        : 4.966
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 6.21
Sun-Target sep (deg) : 103.59
Sun-Moon sep (deg)   : 63.78
B (ring opening deg) : -2.45
PA of pole (deg)     : -2.10
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (") : 17.198
C/A sky separation (km) : 61945.2
NAIF SPICE kernels   : RAJobs_U111+rgf15.spk
URKALLv1.spk
naif0012.tls
nep097.bsp
nep101.bsp
sat4401.bsp
de440.bsp
earth_720101_070426.bpc
jup365.bsp
urall6.bsp
IAU_SATURN_for_RINGFIT.tpc
pck00010.tpc
earth_200101_990628_predict.bpc
uranus_ringframes_rfrench20220627_v1.tf
neptune_ringframes_rfrench20220702a_v1.tf
earth_flat_IAU.spk
    
```

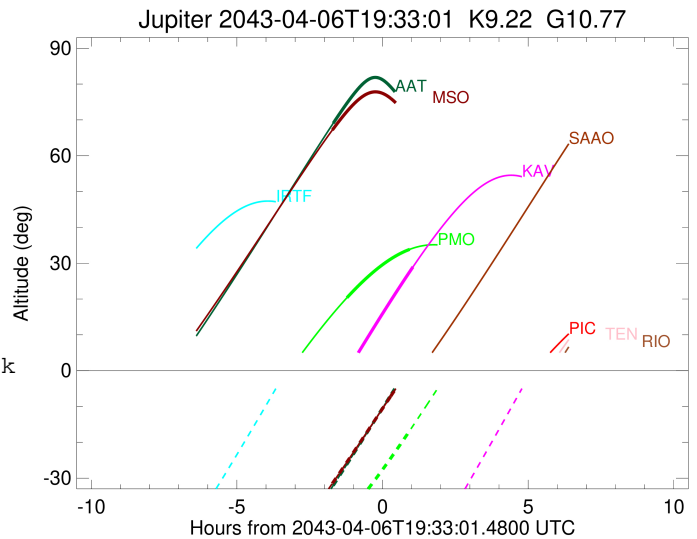
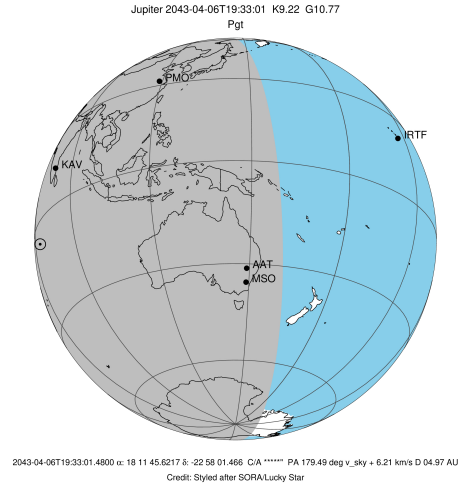


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-04-06T17:51:34.526	69.08	-32.03	71486.1	58.20	61.39
Jupiter	E	2043-04-06T21:17:48.037	62.17	11.66x	71485.7	61.06	64.05

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-04-06T19:34:23.660
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : MSO
Location             : Mt. Stromlo Observatory
Latitude (deg)       : -35.32000
E. Longitude (deg)  : 149.00833
Altitude (km)        : 0.770
Gaia source ID       : 4066623989679695488
2Mass ID (if available) : 18114562-2258009
ICRS Star Coord at Epoch: 18h 11m 45.62174s -22:58:01.46633s
RUWE (>1.4 is poor) : 1.54
K magnitude          : 9.217
G magnitude          : 10.770
RP magnitude         : 10.231
BP magnitude         : 11.124
DUPflag             : 0
Distance (au)        : 4.966
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 6.21
Sun-Target sep (deg) : 103.59
Sun-Moon sep (deg)  : 63.77
B (ring opening deg) : -2.45
PA of pole (deg)    : -2.10
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (") : 17.075
C/A sky separation (km) : 61505.0
NAIF SPICE kernels  : RAJobs_U111+rgf15.spk
URKALLv1.spk
naif0012.tls
nep097.bsp
nep101.bsp
sat4401.bsp
de440.bsp
earth_720101_070426.bpc
jup365.bsp
urall6.bsp
IAU_SATURN_for_RINGFIT.tpc
pck00010.tpc
earth_200101_990628_predict.bpc
uranus_ringframes_rfrench20220627_v1.tf
neptune_ringframes_rfrench20220702a_v1.tf
earth_flat_IAU.spk
    
```



x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-04-06T17:49:40.682	67.15	-31.49	71486.2	57.51	60.73
Jupiter	E	2043-04-06T21:19:29.696	60.95	10.86x	71485.8	60.38	63.42